

Attorney Docket No.: J3711(C)
Serial No.: 10/775,510
Filed: February 10, 2004
Confirmation No.: 1049

REMARKS

Claim 1 has been amended to improve the readability and punctuation of the claim. Additionally, claim 1 has been amended to identify R^C as a "capping group" and to substitute the language "not more than one of R¹, R² and R³ can optionally represent R^C", with the proviso that not more than 20% of the total occurrences of R¹, R² and R³ are R^C. See, for example page 10, lines 19 to 28. Claims 4 and 6 have been amended to employ language consistent with that of amended claim 1; additionally, claim 6 has been amended to specify that at least 85% of the total occurrences of R¹, R² and R³ are diphenylethyl, which is believed to moot the 35 USC 112 rejection with respect thereto. Claim 4 has been further amended to depend from claim 1.

Entry of these amendments is respectfully requested.

Pursuant to the Office Action of November 1, 2007, claims 1, 16, 18-20 and 22-23 were rejected on the ground of nonstatutory obviousness-type double patent over claims 1-43, and 48-51 of copending US 11/316,596. This rejection is believed to be moot in view of the amendment of claim 1 (from which all other claims directly or indirectly depend). Reconsideration thereof is respectfully requested.

Claims 1, 2, 4 6-8, 12, 18-20, 22, and 23 also stand rejected over McGlone et al. (US 6,503,492) in view of Powell (WO00/27348), and claims 16 and 24 stand rejected over McGlone et al. in view of Powell, and further in view of Chuah et al. (WO 03/005977). These rejections are respectfully traversed.

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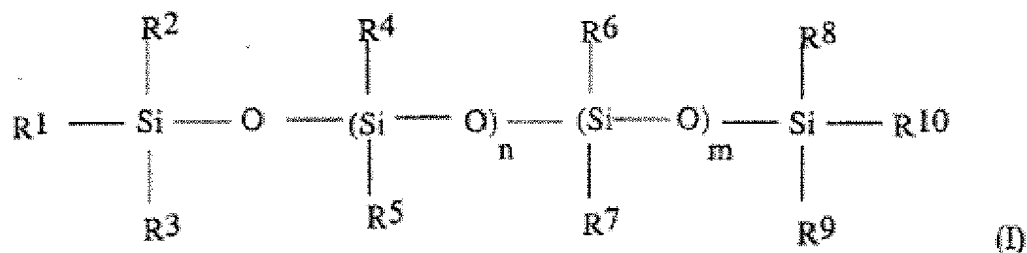
Claim 1 is directed to anhydrous antiperspirant compositions that comprise a particulate aluminium and/or aluminium/zirconium antiperspirant active; a water-immiscible carrier fluid and, optionally, a thickener, gellant or structurant for the carrier fluid, all in amounts as therein more particularly described, the carrier fluid comprising an aryl substituted siloxane which is required to contain a high proportion of phenylalkyl groups containing two phenyl moieties (for example, diphenyl ethyl and/or the residue of α -methyl styrene dimer), wherein the amount of phenyl functionality is such that at least 60% of carbon atoms present in the substituted siloxane are present in aryl groups (R^A , R^4 and R^C representing the groups in which carbon functionality may be present). These substituted siloxanes have a very high refractive index, e.g., 1.54 to 1.58, which is especially suitable for matching with antiperspirant active particulates (particularly zirconium-containing actives, which, as noted in the subject application, typically have refractive indices of from 1.52 to 1.565). Additionally, in the subject compositions, the substituted siloxanes, particularly the diphenylethyl substituted siloxanes, can offer significant processing advantages such as, for example, comparatively low solidification temperature and a wide processing temperature window compared to other phenylated siloxane fluids of similar refractive index.

McGlone et al. is directed to antiperspirant compositions that incorporate a cannabinoid receptor activating agent. The patent discloses that the compositions may include a non-volatile emollient that may consist of a single emollient compound or a mixture of emollients. Identified as typical of such emollients are saturated fatty acids and fatty alcohol esters, ethers containing aliphatic and a polyalkylene group, hydrocarbons, water insoluble ethers, mineral oils and polorganosiloxanes, and mixtures thereof. There is nothing in the patent that discloses substituted siloxanes having the particular substituted phenylalkyl groups required by the subject claims,

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 Serial No.: 10/775,510
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which in the number and amount required by the instant invention, give rise to substituted siloxanes having a high density of phenyl moieties such that at least 60% of the carbon present in the siloxane is present in aryl units.

Powell et al. discloses personal care compositions that contain from 0.5 to 50 parts by weight of an aralky siloxane described by the formula:



where R^1 , R^2 , R^3 , R^4 , R^5 , R^8 , R^9 , and R^{10} are each independently H, alkyl, more preferably (C_1-C_6) alkyl, haloalkyl, more preferably halo (C_1-C_6) alkyl, aryl or aralkyl,

R^6 and R^7 are independently H, alkyl, more preferably (C_1-C_6) alkyl, haloalkyl, more preferably halo (C_1-C_6) alkyl, or aryl; and, subject to certain provisos therein more particularly described, n and m are each independently integers from 0 to 6, with the further proviso that that at least one substituent group of such compound is aralkyl.

At page 4, lines 9 to 26 Powell discloses:

As used herein, the term "aryl" means a monovalent unsaturated hydrocarbon ring system containing one or more aromatic rings per group, which may optionally be substituted on the one or more aromatic rings, preferably with one or more groups selected from amino, nitro, (C_1-C_6) alkyl, and which, in the case of two or more rings, may be fused rings, including, for example, phenyl, 2,4,6-

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trimethylphenyl, 2-isopropylmethylphenyl, 1-pentalenyl, naphthyl, anthryl, preferably phenyl.

As used herein, the term "aralkyl" means an aryl derivative of an alkyl group, preferably a (C₁-C₆)alkyl group, wherein the alkyl portion of the aryl derivative may, optionally, be interrupted by an oxygen atom, such as, for example, phenylethyl, phenylpropyl, 2-(1-naphthyl)ethyl, preferably phenylpropyl, phenoxypropyl, biphenyloxypropyl.

In a highly preferred embodiment, the aralkylsiloxane comprises a compound according to formula (I), wherein R¹ and R¹⁰ are each aralkyl, more preferably phenylpropyl, R², R³, R⁶, R⁷, R⁸, and R⁹ are each (C₁-C₆)alkyl, more preferably methyl, n is 0 and 2 ≤ m ≤ 5, more preferably n is 0 and m is 3. In a very highly preferred embodiment, the aralkylsiloxane comprises α,ω-bis (2-phenylpropyl)siloxane.

There is nothing in Powell that discloses substituted siloxanes having the particular arylalkyl groups R⁴ of the subject claims. This, coupled with the other compositional requirements of claim 1, results in the formula 1 siloxanes in Applicants' claims having a very high density of phenyl groups, with at least 60% of the carbon atoms present in such siloxanes being present in aryl groups, which siloxanes have desirably high refractive indexes, for example, 1.54-1.58. In contrast, in α,ω-bis (2-phenylpropyl)siloxane (the preferred siloxane of Powell et al., and the siloxane exemplified in its antiperspirant Examples), the amount of carbon atoms present in aryl groups is only about 30%. With respect to refractive index, at page 5, lines 9 to 11, Powell reports that in a highly preferred embodiment, the aralkyl content of the aralkylsiloxane is selected to provide a refractive index of from 1.40 to 1.50, more preferably from about 1.44 to 1.48, at 25°C, which refractive index values are lower than those of many antiperspirant actives, in particular, many zirconium-containing actives.

Accordingly, it is respectfully submitted that, even if combined, the combination of McGlone et al. and Powell et al. fails to disclose or suggest antiperspirant

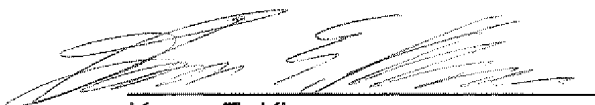
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compositions having the high phenyl density siloxanes as described by the amended claims. There is nothing in Chuah et al. that remedies these deficiencies. Chuah et al. is directed to an anhydrous antiperspirant formulation in the form of a soft solid. The soft solid of Chuah et al. comprises: a particulate antiperspirant salt, an anhydrous carrier fluid in an amount of from 50 to 85% by weight in which at least 70% by weight of the carrier fluid is selected from branched fatty alcohols, aliphatic esters and aromatic esters and a structurant system comprising a dibenzylidene alditol and polymeric thickener. There is nothing in Chuah et al. that discloses or suggests the use of high phenyl density siloxanes as described by the amended claims.

In light of the above amendments and remarks, reconsideration and allowance of the subject claims is respectfully requested.

If a telephone conversation would be of assistance in advancing the prosecution of the present application, applicants' undersigned attorney invites the Examiner to telephone at the number provided.

Respectfully submitted,



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